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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/003,338	10/31/2001	Joseph G. Souza	MS164031.1 (4934)	5199
321	7590	03/06/2006	EXAMINER	
SENNIGER POWERS ONE METROPOLITAN SQUARE 16TH FLOOR ST LOUIS, MO 63102			DU, THUAN N	
		ART UNIT	PAPER NUMBER	
		2116		

DATE MAILED: 03/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	10/003,338	SOUZA ET AL.
	Examiner Thuan N. Du	Art Unit 2116

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) Responsive to communication(s) filed on 20 December 2005.
- 2a) This action is **FINAL**.                            2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) Claim(s) 1-3,5-31 and 33-51 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) 25-31,33-47 and 51 is/are allowed.
- 6) Claim(s) 1-3,5-24 and 48-50 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: \_\_\_\_\_.

**DETAILED ACTION**

1. It is hereby acknowledged that the following papers have been received and placed of record in the file: Amendment (dated 12/20/05).
2. Claims 4 and 32 have been cancelled. Claims 1-3, 5-31 and 33-51 are presented for examination.
3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
5. Claims 1-3, 5-24 and 48-50 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
6. Claim 1 recites the limitation "the device" in line 12. There is insufficient antecedent basis for this limitation in the claim.
7. Claim 48 recites the limitation "the first device" in line 8. There is insufficient antecedent basis for this limitation in the claim.
8. Claims 2, 3, 5-24, 49 and 50 are also rejected for incorporating the above deficiency by dependency.

***Claim Rejections - 35 USC § 103***

9. Claims 1-3, 5-13, 15-24 and 48-50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hernandez et al. [Hernandez] (U.S. Patent No. 5,752,050) and Fry et al. [Fry] (U.S. Patent No. 6,496,938).
10. Regarding claim 1, Hernandez teaches a method for signaling and waiting to suspend first devices (one or more devices 15), said first devices and second devices (the other one or more devices 15) associated with a computer, said first devices having a suspend status independent of a suspend status of said second devices [col. 3, lines 55-61], said first device being connected to a root hub via a communications medium [Fig. 1], the method comprising:
  - determining via a driver of at least one of the first devices when the at least one of the first devices is ready to be suspend (user\_idle) [col. 2, line 61 to col. 3, line 39];
  - sending an idle request from the driver of the at least one of the first devices to the root hub when the at least one of the first devices is determined to be ready to be suspend [col. 3, lines 55-65; col. 6, lines 2-9; col. 7, line 66 to col. 8, line 3], said sending being independent of any idle requests sent by the second devices [col. 3, lines 61-65];
  - waiting, by the driver of the at least one of the first devices that sent the idle request, to receive a call from the root hub to a callback function associated with the at least one of the first device [col. 9, lines 20-32]; and
  - execute by the driver the callback function to suspend the at least one of the first devices that send the idle request [col. 6, lines 34-36].

Hernandez does not explicitly teach that maintaining a state associated with each of the other first device when the at least one of the first device send said idle request is powered down.

Fry teaches a power management method comprising the step of maintaining a state associated with each of other device when one of the devices powered down (the devices are connected in parallel) [Fig. 3, col. 7 line 51 to col. 8 line 10].

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Hernandez and Fry because it would increase the flexibility of the system by allowing each of the devices (connected in parallel) can be controlled independently.

11. Regarding claim 2, Hernandez teaches that the first devices include one or more components associated with the computer [col. 4, line 20].
12. Regarding claim 3, Hernandez teaches that the component is a root hub (21) [Fig. 1].
13. Regarding claim 5, Hernandez teaches that the first devices each having an active state and an idle state [col. 2, lines 37-38] and wherein the first devices are each ready to be suspend when in idle state [col. 2, line 55].
14. Regarding claim 6, Hernandez teaches that the first devices comprise a plurality of nodes organized in a tree structure, and wherein the first devices comprise child nodes of the root hub [col. 8, lines 13-16].
15. Regarding claim 7, Hernandez and Fry together teach the claim method steps as claimed in claim 6. Therefore, Hernandez and Fry together teach the computer-executable instructions for carrying out the claimed method steps.
16. Regarding claim 8, Fry teaches that the nodes in the tree are connected via a USB [Fig. 2; col. 5 lines 55-61].
17. Regarding claims 9-13, Hernandez teaches that the at least one of the first devices has one or more child nodes in the tree structure and wherein the at least one of the first devices is

ready to be suspended only when all of the one or more child nodes thereof is ready to be suspended [col. 8, lines 21-31; col. 8, line 64 – col. 9, line 11].

18. Regarding claims 15 and 16, Hernandez teaches sending an idle request comprises transmitting an input/output control request from the at least one of the devices to the root hub [col. 3, lines 10-35].

19. Regarding claim 17, Hernandez teaches that receiving, by the at least one of the first devices, the call from the root hub to the callback function associated therewith and suspending the at least one of the first devices in response to execution of the received callback function [col. 6, lines 34-36; col. 8, lines 4-7].

20. Regarding claims 18-22, Hernandez teaches the wake up process [col. 8, lines 37-63].

21. Regarding claim 23, Hernandez teaches sending a cancel request when the at least one of the first devices is not ready to be suspended [col. 8, lines 26, 29-30].

22. Regarding claim 24, Fry teaches each of the devices is controlled independently [col. 9, lines 5-11].

23. Regarding claims 48-50, they do not teach or further define over the limitations recited in the rejected claims above. Therefore, claims 48-50 are also rejected as being unpatentable over Hernandez and Fry for the same reasons set forth in the rejected claims above.

*Allowable Subject Matter*

24. Claim 14 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

25. Claims 25-31, 33-47 and 51 are allowed.

***Response to Arguments***

26. Applicant's arguments filed 12/20/05 have been fully considered but they are not persuasive.

27. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the feature upon which applicant relies (i.e., decentralized driver based device management) is not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). The claims only claim that the idle request sent by the first device being independent of any idle requests sent by the second devices. Hernandez teaches that only the affected device(s) send the request, not all devices (“*each* device driver 15 to determine if the power event received *should* affect *its coupled device's* power state” [col. 3, lines 55-57], “*Once* the device driver has determined that the event affects *its coupled device's* power state” [col. 3, lines 59-61]). Therefore, the requests of the devices are sent independent from each other.

***Conclusion***

28. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

29. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thuan N. Du whose telephone number is (571) 272-3673. The examiner can normally be reached on Monday-Friday: 9:30 am - 6:00 pm, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynne H. Browne can be reached on (571) 272-3670.

Central TC telephone number is (571) 272-2100.

The fax number for the organization is (571) 273-8300.

30. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll free).

Thuan N. Du  
March 1, 2006



THUAN N. DU  
PRIMARY EXAMINER